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REUTER
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STAT SPACE SHUTTLE TO LAUNCH SUPER SPY SATELLITES
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THE SPACE SHUTTLE THIS MONTH WILL LAUNCH THE FIRST OF A NEW SERIES OF SPY SATELLITES WHICH ONE INTELLIGENCE EXPERT SAYS WILL VASTLY IMPROVE U.S. ABILITY TO CHECK SOVIET COMPLIANCE WITH ARMS AGREEMENTS.

THE SOPHISTICATED NEW SPACE SATELLITES THUS COULD HAVE A MAJOR IMPACT ON THE NEW U.S.-SOVIET ARMS TALKS WHICH THE TWO GOVERNMENTS THIS WEEK AGREED TO OPEN, PERHAPS IN MARCH.

STAT SOME OF THEM WILL GATHER ELECTRONIC SIGNALS AT AN UNPRECEDENTED RATE; OTHERS WILL DART ABOUT, CHANGING ORBITS AND TAKING PICTURES OF THE SOVIET UNION 24 HOURS A DAY; JOHN PIKE OF THE FEDERATION OF AMERICAN SCIENTISTS TOLD REUTERS.

"THEY ARE ELECTRONIC MARVELS," SAID PIKE, THE PRIVATE GROUP'S ASSOCIATE DIRECTOR FOR SPACE POLICY AND A RARE SPECIALIST ON TECHNICAL INTELLIGENCE GATHERING WORKING IN THE PRIVATE SECTOR.

HE SAID THE SECRET MILITARY SHUTTLE MISSION TO BEGIN ON JANUARY 23 WILL LAUNCH A SIGINT (SIGNAL INTELLIGENCE) SATELLITE 22,000 MILES INTO SPACE TO MONITOR SOVIET ELECTRONIC COMMUNICATIONS SUCH AS MISSILE TELEMETRY, RADIO BROADCASTS AND RADAR SIGNALS.

IN MID-1986, THE PENTAGON IS EXPECTED TO USE THE SHUTTLE TO PUT THE NEW IKON IMPROVED KEYHOLE PHOTO RECONNAISSANCE SATELLITE INTO ORBIT.

THE IKON, ALSO KNOWN AS KH-12, WILL BE ABLE TO SWOOP UP AND DOWN BETWEEN ABOUT 70 AND 300 MILES ABOVE THE SOVIET UNION AND TAKE SHARP PICTURES EVEN AT NIGHT, PIKE SAID IN AN INTERVIEW.

"SIGINT WILL HAVE PERHAPS TWO TO THREE TIMES THE GATHERING ABILITY OF CURRENT ELECTRONIC MONITORING SATELLITES AND IKON WILL ALLOW US TO KEEP ALMOST A CONSTANT WATCH ON THE MOVEMENT OF SOVIET MOBILE MISSILE LAUNCHERS," HE SAID.

DETAILS OF THE UPCOMING MISSIONS ARE TOP SECRET, BUT PIKE AND OTHER PRIVATE SECTOR SCIENTISTS EXPECT POSSIBLY FOUR IKON SATELLITES TO BE PUT INTO SPACE ON MILITARY SHUTTLE MISSIONS.

IKON WILL BE ABLE TO DISTINGUISH OBJECTS FOUR TO SIX INCHES ACROSS AND TRANSMIT PHOTOGRAPHS TO THE UNITED STATES INSTANTLY FOR PROCESSING AND ANALYSIS, HE SAID.

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"LET'S SAY THEY (THE SOVIETS) HAD THREE GRAPEFRUIT LINED UP ON THE GROUND IN A ROW. IF YOU TOOK THE MIDDLE GRAPEFRUIT OUT, YOU COULD TELL BY AN IKON PICTURE THAT IT WAS MISSING."

U.S. SCIENTISTS SAY THE SOVIET UNION HAS NOTHING TO MATCH THE TECHNICAL ABILITY OF IKON.

"I HAVE NOT HEARD ANY SUGGESTION THAT THEY HAVE ANYTHING ON THE ORDER OF SIGINT," SAID PIKE.

"AS FOR IKON, IN THE LAST YEAR OR SO THEY ARE JUST BEGINNING TO DO THE THINGS THAT WE DID 10 OR 12 YEARS AGO."

HE SAID ONE MAJOR ADVANCE IN IKON WILL BE THE ABILITY TO TAKE HIGH RESOLUTION (DETAILED) PICTURES AT NIGHT AND TO CARRY ABOUT 5,000 POUNDS OF FUEL FOR MANEUVERING. IT CAN BE REFUELLED IF NECESSARY.

U.S. INTELLIGENCE EXPERTS WILL USE A GIANT COMPUTER TO FILTER OUT UNNEEDED ELECTRONIC INFORMATION GATHERED BY THE SIGINT SATELLITE.

PIKE SAID HE COULD NOT CONFIRM REPORTS THAT THE NEW SIGNAL GATHERING SATELLITE WILL BE PERCHED OVER THE SOVIET UNION, BUT HE SAID THE EXACT POSITION DID NOT MATTER.

"IT WILL BE ABLE TO VIRTUALLY COVER THAT HALF OF THE WHOLE GLOBE, AND THE ANTENNAE CAN BE SHIFTED TO CONCENTRATE ON CERTAIN AREAS," HE SAID.

BUT AS SOPHISTICATED AS THE NEW SATELLITES ARE, THEY WILL BE OVERSHADOWED BY THE BOOSTER SURVEILLANCE AND TRACKING SYSTEM (BSTS) SATELLITE SYSTEM TENTATIVELY SCHEDULED FOR DEPLOYMENT BEGINNING IN THE MID-1990s.

"BSTS WILL BASICALLY BE A PHOTO SATELLITE WITH A CAMERA DESIGNED TO TAKE PICTURES OF ROCKETS OR, MORE SPECIFICALLY, THE FLAMES COMING FROM ROCKET ENGINES," PIKE SAID.

"FROM THE DATA THAT YOU CAN COLLECT FROM SOMETHING LIKE THIS, YOU WILL KNOW THE EXACT THRUST OF THE ROCKET, ITS MAXIMUM PAYLOAD, WHAT FUEL IT IS BURNING AND HOW EFFICIENT THE ENGINE IS."

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SUCH INFORMATION IS NECESSARY TO MONITOR SOVIET COMPLIANCE WITH ARMS CONTROL AGREEMENTS; BUT THE UNITED STATES CURRENTLY MUST RELY ON DECODING ELECTRONIC TELEMETRY SIGNALS THAT IT INTERCEPTS AS THEY ARE SENT BACK TO THE SOVIET UNION.

WHY AREN'T SOVIET SPY SATELLITES MORE SOPHISTICATED?

"IT'S PARTLY A TECHNOLOGY GAP AND PARTLY A NEED GAP," PIKE SAID.

"THEY DEPEND MORE ON ANTENNAE ATOP THEIR EMBASSY IN WASHINGTON AND IN LITTLE TRUCKS PARKED AROUND TOWN PICKING UP ELECTRONIC SIGNALS FROM BUILDINGS WHERE OUR SECRET WORK IS GOING ON."